



## Module 3, Vignette 2, Safety and Efficacy of Ultra-rapid Insulins

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So here we'll summarize some of the safety and efficacy data as it pertains to the second-generation insulins. As you've seen through the various slides and the graphs, when we look at the PK/PD, there's this obvious shift to the left. And what that translates to, and what that means for our patients, is a faster onset of action. We've seen that with ultra-rapid lispro in some of the clinical trials. We've seen that with the second-generation insulins, and what this means is it allows patients to be able to use the insulin not necessarily always before a meal. There is some freedom of being able to inject after starting a meal, which has historically not been the case with any of our first-generation products. And here you have that ability, in some cases, 15, 20 minutes after a meal. So, it gives patients that flexibility.

What that also translates into is no compromise from a safety standpoint. As we know when we think about human insulin, regular insulins, we've known that the first-generation insulins have had a better hypoglycemic profile. What we've seen in clinical trials [of ultra-rapid insulins] is that it is no worse, and we have this added advantage. In many of the trials [of ultra-rapid insulins], postprandial glucose levels were decreased and we saw noninferiority when it comes to A1C. And we know from hypoglycemic and a safety standpoint, it's very well-maintained in these areas as well.